



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,632	06/24/2003	Atsushi Okuyama	500.42806X00	1458
20457	7590	11/03/2005		
ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-3873			EXAMINER PATEL, HETUL B	
			ART UNIT 2186	PAPER NUMBER

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/601,632	Applicant(s) OKUYAMA ET AL.	
	Examiner Hetul Patel	Art Unit 2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2 and 4-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-8 is/are allowed.
- 6) ☒ Claim(s) 2, 4 and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to communication filed on October 26, 2005. This amendment has been entered and carefully considered. Claims 1 and 3 are cancelled; claims 2 and 4-8 are amended; and claim 9 is newly added and presented for examination.
2. The objection to the title is withdrawn due to the amendment filed on October 20, 2005.
3. Applicant's arguments filed on October 26, 2005 have been fully considered but they are not persuasive.
4. The rejection of claims 2 and 4 as in the previous office action is respectfully maintained and reiterated below for Applicant's convenience.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art, Igari (JP 2001-256004 A) in view of Stebbings (USPN: 6,636,689).

As per claim 4, Igari teaches an information recording/reproducing system, comprising a magnetic disk apparatus (HDD 1 in Fig. 1) for recording/reproducing information and a host system (200 in Fig. 1) to which said magnetic disk apparatus can removably be connected and which makes access to said magnetic disk apparatus for recording/reproduction of the information, wherein said magnetic disk apparatus includes authentication key generating means for generating an authentication key (the second authentication data) (e.g. see paragraph [0018] and Fig. 1). According to the definition, the term "eccentric" means "departing from a recognized" or "differing from the normal". Igari teaches that said authentication key is generated on the basis of eccentricity characteristic (i.e. the time information when creating the first authentication data) of a magnetic disk which said magnetic disk apparatus includes (e.g. see paragraph [0028]).

However, Igari does not teach that the authentication key is generated on the basis of physical characteristic of said magnetic disk apparatus itself. Stebbings, on the other hand, teaches that the authentication key is generated on the basis of physical characteristic of said magnetic disk (i.e. the data disk) apparatus itself (e.g. see the abstract and Col.13, lines 6-12). Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the current invention was made to implement Stebbings' teachings in the system taught by Igari so it would prevent unauthorized users from accessing from the host to the magnetic disk data. Another disc having the same modulation characteristics is required in order for it to be considered an authenticated disk.

As per claim 2, the combination of Igari and Stebbings teaches the claimed invention as described above and furthermore, Igari teaches that said magnetic disk apparatus (HDD 1 in Fig. 1) and said host system (200 in Fig. 1) include authentication key recording means for recording said authentication key (the second authentication data), respectively, authentication data generating means for generating authentication data on the basis of said authentication key, respectively, and at least one access control means for controlling access of said host system to information of said magnetic disk apparatus on the basis of the authentication data of said magnetic disk apparatus (e.g. see paragraphs [0018] and [0028]).

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Stebbings, further in view of Karube (USPN: 6,046,870).

As per claim 9, the combination of Igari and Stebbings teaches the claimed invention as described above. However, neither AAPA nor Stebbings teaches that the eccentricity characteristic of the magnetic disk results from an error between a center of rotation of the spindle motor and a center of rotation of the magnetic disk. Karube, on the other hand, teaches that the position error signal indicating the current position of the magnetic head contains information on eccentricity of the magnetic disk which caused by a spindle motor or the like, i.e. the eccentricity characteristic of the magnetic disk results from an error between a center of rotation of the spindle motor and a center of rotation of the magnetic disk as claimed (e.g. see Col. 6, lines 11-15). Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the current

invention was made to implement the teaching of Karube in the system taught by the combination of Igari and Stebbings. In doing so, whenever there is a position error occurs between the magnetic disk and the spindle motor, the eccentricity characteristic is changed accordingly to indicate such an error.

Allowable Subject Matter

7. Claims 5-8 are allowed.

8. The following is an examiner's statement of reasons for allowance:

The prior arts of record do not teach nor suggest, either alone or in combination, all the limitations of the amended claims 5-7 of the current invention; particularly generating the authentication key based on (i) an eccentricity compensating signal for compensating for eccentricity characteristic of a magnetic disk which said magnetic disk apparatus includes; (ii) the results of wavelet transformation of an eccentricity compensating signal for compensating for eccentricity characteristic of a magnetic disk which said magnetic disk apparatus includes; and (iii) eccentricity compensating signals generated for different cylinders at three locations at the most. Furthermore, none of prior arts of record teaches or suggests, either alone or in combination, all the limitations of the amended claim 8 of the current invention; particularly an information recording/reproducing system comprising means for generating an eccentricity compensating signal for compensating for eccentricity of a magnetic disk which said magnetic disk apparatus includes, means for enciphering said eccentricity compensating signal on the basis of said authentication key, means for recording said

eccentricity compensating signal enciphered, and means for deciphering said enciphered eccentricity compensating signal to thereby restore the eccentricity compensating signal before having been enciphered on the basis of said authentication key.

Remarks

9. As to the remark, Applicant asserted that Examiner's definition of the term eccentric appears to be an a standard English/non-technical definition which is clearly not applicable to the technical field of magnetic disks and devices related to magnetic disks.

Examiner respectfully traverses Applicant's remark for the following reasons:

In response to applicant's argument that the terms "eccentric" and "eccentricity" are not intended to be interpreted on the basis of a standard English and/or college dictionary, Examiner would like to point out that the words of a claim must be given their "plain meaning", which refers to the ordinary and customary meaning given to the term by those of ordinary skill in the art, unless they are defined in the specification (MPEP 2111.01 (I)-(II)). Therefore, the fact that these terms, i.e. "eccentric" and "eccentricity", are not defined anywhere in the specification of this application, these terms are to be read broadly and are not limited by any specific definition and/or interpretation not clearly expressed in the specification. If Applicant would like to further define the term "eccentricity" beyond that which can be understood from the present disclosure, an amendment to the specification would be necessary.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hetul Patel whose telephone number is 571-272-4184. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim can be reached on 571-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HBP
HBP



MATTHEW D. ANDERSON
PRIMARY EXAMINER